

WOODS HOLE OCEANOGRAPHIC INSTITUTION
WOODS HOLE, MASSACHUSETTS

March 6, 1958

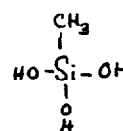
Dr. J. Lederberg
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Dear Joshua:

As far as I am aware there is no evidence for compounds containing -Si-C- linkages in any biological system, though no exhaustive search for such substances has been made to the best of my knowledge. Complexes of organic molecules with silicic acid, probably held by forces of electrovalency, hydrogen-bond formation, etc. are not uncommon in biology. Some of these are silicate esters, but there is no evidence yet that they play any role in frustular synthesis. The following references might be helpful to you:

- Holt, P.F. and Yates, D.M. Tissue silicon: a study of the ethanol-soluble fraction, using Si^{31} . Biochem. J. 54: 300-305. 1953.
Holt, P.F. and Bowcott, J.E.L. The interaction of proteins with silicic acid. Biochem. J. 57: 471-475. 1954.
Engel, W. Untersuchungen über die Kieselsäureverbindungen im Roggenhalm. Planta 41: 358-390. 1953.

Along these lines you might be interested to know that diatoms are not capable of using one of the simplest compounds with a -Si-C- bond as a source of silicon, namely, methyl siliconate (Lewin, Plant Physiol. 30: 129-134. 1955).



Ralph is sending the enclosed card with a few brief notes on the symbiotic algae which you were asking about.

We are pleased that you so much enjoyed your trip to Australia. I gather that you have now been right around the planet, which we have still to do. Since we don't like to leave Woods Hole in the summer time, we are thinking of taking a small vacation in Puerto Rico before very long. We have been studying Spanish, hoping that we will be able to get a little practicing in when we get down there.

With the sun shining on this warm spring-like day, who could imagine that Buzzards Bay was frozen over just two weeks ago. We walked out on the ice.

What are your new duties and how do you divide your time between two departments? What position does Esther hold now? Please give her our best regards.

With best wishes,

Joyce

Joyce Lewin